

2

3

DETECTION OF RANDOMNESS IN SPARSE DATA SET OF

4

THREE DIMENSIONAL TIME SERIES DISTRIBUTIONS

5

6

ABSTRACT OF THE DISCLOSURE

7

A two-stage method is provided for automatically

8

characterizing the spatial arrangement among data points of a

9

three-dimensional time series distribution in a data processing

10

system wherein the classification of said time series

11

distribution is required. The utilizes two-stage method

12

Cartesian grids to determine (1) the number of cubes in the grids

13

containing at least one input data point of the time series

14

distribution; (2) the expected number of cubes which would

15

contain at least one data point in a statistically determined

16

random distribution in said grids; and (3) an upper and lower

17

probability of false alarm above and below said expected value

18

utilizing a second discrete probability relationship in order to

19

analyze the randomness characteristic of the input time series

20

distribution.